

SMALL LOT SEED PROCESSING WORKSHOP

Dr. Earl Belcher 1/

The object of this workshop is to acquaint you with equipment and techniques for processing small seed lots. A small seed lot, for the purpose of this workshop, is one consisting of 50 pounds or less of seed.

Indiana depicts a situation common to most of the Eastern States. With 23.2 million acres of land, 16.8 million acres are in farms.* There are some 88,000 farms in Indiana of which 17,300 are less than 50 acres in size. Only 17 percent of the land area is forested. Therefore, small woodlots and urban forestation comprise a large portion of the forestry. This type of forestry requires a large number of species and seed sources which are supplied by small seed lots.

There are three good reasons why we should improve our handling of small seed lots. First, with labor costs increasing, it becomes more important to more fully utilize available labor. Second, better processing can reduce many of the nursery problems. And third, the increased cost of producing improved stock necessitate improved processing techniques.

Large machinery and a lot of manpower can complete some processing jobs quickly, but a rewarding accomplishment requires interested participation. Permanent employees take greater interest in their accomplishment than transient employees. Further, a lot of the smaller equipment being produced for laboratory samples has an operating capacity in excess of that needed for most small lot processing. Thus, smaller equipment will get the job done with existing labor if you are willing to take a little longer.

If tree and shrub seed lots are properly cleaned during processing, many pathogens can be eliminated from the nurseries. Fungal infection of pine seed has been directly correlated with the amount of insect damage in a seed lot.

Lastly, we are moving into an era of tree improvement. Tree selection, roguing and controlled pollination are expensive operations. Even at the initial stages of tree improvement, which include selection and roguing for seed production areas, there are increased costs due to establishment and maintenance. These costs can only be minimized by maximizing seed production and seed processing°

* Based on figures from 1979 Almanac of Facts

1/ Director, Eastern Tree Seed Laboratory, operated by the U.S. Forest Service and the Georgia Forestry Commission, Macon, Ga.

As an experiment in seed evaluation, I placed a packet of ponderosa pine on the table at the meeting with the knowledge that the seed sold for \$20 per pound. The package contained exactly two ounces of seed which would be worth \$2.50 (20/16 X 2) on face value. Five estimations were right on it, so we do have some good estimators of volume; but if you had looked closely, you would have noted that there was quite a lot of trash. Also, several seeds, had visible insect holes. This should have made you suspicious. The seed is mostly empty and insect damaged. In fact the viability is about two percent; thus, making the two ounces worth a nickel, at best.

Three estimates came close, the rest ranged from \$1.00 to \$9.00. This has been the problem in the past; too much evaluation on looks and too little on facts. But here are some company representatives who have some facts for you.

SPEAKERS IN ATTENDANCE

Hewlett-Packard Corp.
1700 South Baker Street
McMinnville, OR 97128
(phone: 503-472-5101)
Att: Joe Fowler
(equipment: X-ray units)

Airflow Co., Dryomatic Div.
Montgomery Airpark
19050 Laytonsville Road
Gaithersburg, MD 20760
(phone: 301-948-5000, Ext. 225)
Att: Richard Wolcott
(equipment: humidity control equipment, chemical driers)

The Hance Corporation
235 E. Broadway
Westerville, OH 43081
(phone: 614-882-7400)
Att: Richard Hill
(equipment: Seed cleaner, testers and elevators)

Crippen Mfg. Co.
700 West End St.
Alma, MI 48801
(phone: 517-463-2119)
Att: Robert Frevert
(equipment: seed cleaners, wet & dry dewinger)

Melvin R. Dybvig
4007 Elmwood
Tillamook, OR 97141
(phone: 503-842-7980)
Att: Mel Dybvig
(equipment: Macerator)

COMPANIES PARTICIPATING WITH HANDOUTS

Seedburo Equipment Co.
1022 West Jackson Blvd.
Chicago, IL 60607
(equipment: general processing)

International Forest Seed Co.
P.O. Box 76008
Birmingham, AL 36223
(equipment: Cone drying & seed processing)

Triple/s Dynamics Systems
1031 s. Haswell
Dallas, TX 75223
(equipment: gravity separators)

Sortex North America
1901 Enterprise Blvd.
West Sacramento, CA 95691
(equipment: air cleaners & sorters)

Missoula Equipment Development Center
USDA-Forest Service
Bldg. 1, Ft. Missoula
Missoula, MT 59801
(equipment; dewinger)

Barnes Tree Improvement Co.
P.O. Box 66
Cottage Grove, OR 97424
(equipment: general processing)

CEA Carter-Day Co.
500 73rd Ave, N.E.
Minnapolis, MN 55432
(equipment: general cleaning)

R.W. McPherson Assoc.
P.O. Box 5011
Monroe, LA 71201
(equipment: general processing)